

WHAT IS CLAIMED IS:

(1) A radio LAN master station comprising;  
    a transceiver,  
    a plurality of directivity antennas directed to each  
specific directions,  
    a power distributor coupling said antennas with said  
transceiver.

(2) A radio LAN master station according to claim 1, a  
polarization plane of any antenna is orthogonal to a polarization  
plane of an adjacent antenna.

(3) Process for determining angle of polarization plane from  
vertical plane or horizontal plane in a radio LAN master station  
according to claim 1, comprising the steps of;

    selecting one of the antennas having the largest  
interference,

    rotating angle of polarization plane of the selected antenna  
to determine angle of polarization plane called a reference angle  
so that interference becomes the minimum,

    determining angle of polarization plane of other antennas  
based upon said reference angle so that angle of polarization  
plane of any antenna is orthogonal to angle of polarization plane  
of an adjacent antenna.

(4) Process for determining angle of polarization plane from  
vertical plane or horizontal plane in a radio LAN master station  
system according to claim 1, comprising the steps of;

    selecting one of the antennas having the largest

interference,

selecting one of vertical polarization plane and horizontal polarization plane of said selected antenna, as a reference polarization plane,

determining angle of polarization plane of other antennas based upon said reference polarization plane so that polarization plane of any antenna is orthogonal to an adjacent antenna.

(5) Process for determining angle of polarization plane from vertical plane or horizontal plane in a radio LAN master station system according to claim 1, comprising the steps of;

first steps comprising the steps of;

selecting one of the antennas having the largest interference,

selecting one of vertical polarization plane and horizontal polarization plane of said selected antenna, as a reference polarization plane,

determining angle of polarization plane of other antennas based upon said reference polarization plane so that polarization plane of any antenna is orthogonal to an adjacent antenna,

second steps comprising the steps of;

selecting one of the antennas having the largest interference larger than a predetermined threshold, and

reversing polarization plane of said selected antenna from vertical polarization to horizontal polarization, or from horizontal polarization to vertical polarization, and

third steps repeating each steps of said second steps until interference of all the antennas becomes smaller said

predetermined threshold.

(6) Process for determining angle of polarization plane from vertical plane or horizontal plane in a radio LAN master station system according to claim 1, comprising the steps of;

selecting one of horizontal polarization and vertical polarization of each antenna, so that interference of said antenna is the smaller.

(7) Process for determining angle of polarization plane from vertical plane or horizontal plane in a radio LAN master station system according to claim 1, comprising the steps of;

rotating polarization plane of each antenna so that interference in said antenna is the minimum.

determining angle of polarization plane which provides said minimum interference.

(8) Process for determining angle of polarization plane from vertical plane or horizontal plane in a radio LAN master station system according to claim 1, comprising the steps of;

(a) the antennas being classified into groups each having a plurality of antennas, so that interference between adjacent groups is small,

(b) determining polarization plane of a first antenna in a first group,

(c) determining polarization plane of a second antenna in a first group, said second antenna locating adjacent to said first antenna, so that polarization plane of said second antenna is orthogonal to polarization plane of said first antenna.

(d) repeating said step (c) for other antennas,

(e) repeating said steps (b) and (c) for the antennas in other groups.